CLAIM LISTING

A listing of an entire set of claims 1-32 is submitted herewith per 37 C.F.R. §1.121 to replace all prior versions, and listings, of claims in the application.

1.   (Original) A method of allocating memory in a wireless communication system, comprising:

loading an application into a wireless communication device;

compiling at least a portion of the application into native instructions;

determining a runtime sensitivity of the native instructions;

determining availability of internal memory; and

inserting at least a portion of the native instructions into the internal memory at runtime based on the determined availability of internal memory and the runtime sensitivity determination.

2.   (Original) The method of claim 1 wherein the application comprises a Java application with at least one Java class, each Java class including at least one bytecode.

3.   (Original) The method of claim 1 wherein compiling at least a portion of the application into native instructions comprises passing the application through a just-in-time compiler, the just-in-time compiler adapted to detect runtime sensitivity of the native instructions.

4.   (Original) The method of claim 1 wherein the compiled application comprises a combination of bytecodes and native instructions.

5.   (Original) The method of claim 1 wherein determining the runtime sensitivity comprises detecting a memory attribute code.

6.   (Original) The method of claim 1 wherein determining the runtime sensitivity comprises analyzing a bytecode for memory addressing requirements and marking the analyzed bytecodes when the memory addressing requirements are extensive.

7.   (Original) The method of claim 1 wherein inserting the native instructions into the internal memory comprises copying a set of instructions associated with the application from a flash memory to an internal random-access memory.

8.   (Original) The method of claim 1 wherein the internal memory comprises an internal random-access cache memory.

9.   (Original) The method of claim 1 further comprising:
        adding de-referencing code to the compiled application, wherein the de-referencing code allows an application loader to insert a portion of the compiled application into the available internal memory prior to executing the application.

10.   (Original) The method of claim 1 further comprising:
        constructing a de-referencing table; and
        attaching the de-referencing table to the compiled application, wherein the de-referencing table includes memory location information and memory size information associated with the portion of the native instructions to be inserted into the internal memory prior to executing the application.

11.   (Original) The method of claim 1 further comprising:
        updating a pseudo-cache table, the pseudo-cache table including memory location information and memory size information associated with the portion of the native instructions inserted into the internal memory.

12.   (Original) The method of claim 1 further comprising:
        executing the compiled application.

13.   (Original) The method of claim 1 further comprising:

relinquishing the internal memory having the inserted native instructions when the compiled application has been executed.

14.   (Original) The method of claim 1 further comprising:

updating a pseudo-cache location indicator, the pseudo-cache location indicator including an address of an available pseudo cache allocated to the inserting of the native instructions at runtime.

15.   (Original) The method of claim 1 further comprising:

updating a pseudo-cache size indicator, the pseudo-cache size indicator including a number of bytes available in a pseudo cache.

16.   (Original) A computer usable medium including a program to allocate memory in a wireless communication system, comprising:

computer program code to load an application into a wireless communication device;

computer program code to compile at least a portion of the application into native instructions;

computer program code to determine a runtime sensitivity of the native instructions;

computer program code to determine availability of internal memory; and

computer program code to insert at least a portion of the native instructions into the internal memory at runtime based on the determined availability of internal memory and the runtime sensitivity determination.

17.   (Original) The computer usable medium of claim 16 wherein computer program code to compile at least a portion of the application into native instructions comprises computer program code to pass the application through a just-in-time compiler, the just-in-time compiler adapted to detect runtime sensitivity of the native instructions.

18.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to add de-referencing code to the compiled

application, wherein the de-referencing code allows an application loader to insert a

portion of the compiled application into the available internal memory prior to

executing the application.

19.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to construct a de-referencing table; and

computer program code to attach the de-referencing table to the compiled

application, wherein the de-referencing table includes memory location information

and memory size information associated with the portion of the native instructions to

be inserted into the internal memory prior to executing the application.

20.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to update a pseudo-cache table, the pseudo-cache

table including memory location information and memory size information associated

with the portion of the native instructions inserted into the internal memory.

21.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to execute the compiled application.

22.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to relinquish the internal memory having the inserted

native instructions when the compiled application has been executed.

23.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to update a pseudo-cache location indicator, the

pseudo-cache location indicator including an address of an available pseudo cache

allocated to the inserting of the native instructions at runtime.

24.   (Original) The computer usable medium of claim 16 further comprising:

computer program code to update a pseudo-cache size indicator, the pseudo-
cache size indicator including a number of bytes available in a pseudo cache.

25.   (Original) A wireless communication device, comprising:

means for loading an application into the wireless communication device;

means for compiling at least a portion of the application into native

instructions;

means for determining a runtime sensitivity of the native instructions;

means for determining availability of internal memory; and

means for inserting at least a portion of the native instructions into the internal

memory at runtime based on the determined availability of internal memory and the

runtime sensitivity determination.

26.   (Original) The device of claim 25 further comprising:

means for adding de-referencing code to the compiled application, wherein the

de-referencing code allows an application loader to insert a portion of the compiled

application into the available internal memory prior to executing the application.

27.   (Original) The device of claim 25 further comprising:

means for constructing a de-referencing table; and

means for attaching the de-referencing table to the compiled application,

wherein the de-referencing table includes memory location information and memory

size information associated with the portion of the native instructions to be inserted

into the internal memory prior to executing the application.

28.   (Original) The device of claim 25 further comprising:

means for updating a pseudo-cache table, the pseudo-cache table including

memory location information and memory size information associated with the

portion of the native instructions inserted into the internal memory.

29.   (Original) The device of claim 25 further comprising:

means for executing the compiled application.

30.   (Original) The device of claim 25 further comprising:

means for relinquishing the internal memory having the inserted native instructions when the compiled application has been executed.

31.   (Original) The device of claim 25 further comprising:

means for updating a pseudo-cache location indicator, the pseudo-cache location indicator including an address of an available pseudo cache allocated to the inserting of the native instructions at runtime.

32.   (Original) The device of claim 25 further comprising:

means for updating a pseudo-cache size indicator, the pseudo-cache size indicator including a number of bytes available in a pseudo cache.